



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

10

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/206,852	12/08/1998	RICHARD F. ALLISON	6550000028	6041
7380	7590	03/30/2006	EXAMINER	
SMART & BIGGAR P.O. BOX 2999, STATION D 900-55 METCALFE STREET OTTAWA, ON K1P5Y6 CANADA			BAGGOT, BRENDAN O	
		ART UNIT	PAPER NUMBER	
		1638		
DATE MAILED: 03/30/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/206,852	ALLISON ET AL.
	Examiner Brendan O. Baggot	Art Unit 1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 January 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3,5-13 and 17-32 is/are pending in the application.
- 4a) Of the above claim(s) 14-16,20 and 23 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3,5-13 and 17-32 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

1. The Office acknowledges receipt of Applicant's Request for Continued Examination dated 1/13/06. Claims 25-32 are newly added. Claims 14, 15, 16, 20, 23 have been canceled by Applicant. Claims 1, 3, 5-13, 17-32 are pending.

All rejections not set forth below have been withdrawn.

Claim Rejections - 35 USC § 112 second paragraph

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 5-13, 17-32 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is unclear in step (c) whether the medium comprising DNA also contains the meristematic tissue from step (a). It is unclear whether the root in step (b) is the same as the meristematic tissue of step (a) or they are in two separate containers. It is unclear whether the root of step (b) is also exposed to the low amperage current. It is unclear whether the (+) lead of step (b) is removed before the (-) lead of step (c) is applied. Clarification and / or correction is required.

Claim Rejections - 35 U.S.C. §112, first paragraph

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3, 5-13, 17-32 are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants are invited to point to the page and line number in the specification as originally filed providing support for "leguminous". No amendment shall introduce new matter into the disclosure of the invention. 35 U.S.C. § 132. See *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989). Support is found in the specification for soybean. Absent support in the originally filed specification, Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 U.S.C. §103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1, 3, 5-13, 17-32 are rejected under 35 U.S.C. 103(a) as being obvious and unpatentable over Burchi et al, (Burchi et al, J. Genet. and Breed, 49:163-168) in view of Bidney et al (Bidney et al, U.S. Patent 6,166, 291), and in light of Griesbach, (

Plant Science Volume 102, Issue 1, 1994, Pages 81-89) and in light of Vik, et al, (Acta Hort. (ISHS) (2001) 560:101-103.

Burchi teaches a method for transforming a plant comprising the steps of contacting a meristematic tissue of the plant with a medium comprising DNA; suspending a root of the plant in buffer and contacting said root with a lead of a power source; contacting the medium comprising DNA with a lead of the power source; and applying a low amperage current from the power source, thereby causing the DNA to migrate from the medium to the cells of the meristematic tissue of the plant. Burchi et al, page 164-165 (1995). Burchi does not teach the positive lead in the soil/root medium, a "leguminous plant" nor "T-DNA region and border sequences".

Bidney teaches a leguminous plant transformation using T-DNA (e.g., column 1, line 41; column 4, line 3; and example 3).

Given the recognition of those of ordinary skill in the art of the value of transforming a plant with a vector comprising DNA by applying electrical current to drive the migration of DNA via electrophoresis into a plant meristem to produce transgenic plants, as taught by Burchi et al, it would have been obvious to one of ordinary skill in the art to use the methods taught by Burchi et al and to apply it to another plant such as the leguminous plant of Bidney even though the Burchi reference indicates this teaching appears to be an inadvertent typographical error because this positioning of the electrodes would cause the DNA to move into the buffer instead of the meristem.

Vik et al teaches the negative lead placed in the agarose / DNA solution contacting the meristem and the positive electrode in the soil producing current through

the meristem thus driving DNA from the agarose plug into the meristem tissue. Vik also teaches that DNA has a weak negative charge which allows it to move in direction of positive electrode. (See Vik et al, (2001) page 102, under Materials and Methods, and page 102, Line 2).

Griesbach et al teaches the negative lead in the DNA containing agarose medium.

That Griesbach, in 1994, recited the DNA migrating from negative electrode to positive electrode and thus reveals Burchi et al's recitation of putting the cathode in the DNA containing agarose plug as mere typographical error (see Griesbach, (1994) Figure 1) as confirmed by Vik et al's teaching on the electrical leads (Vik et al, 2001).

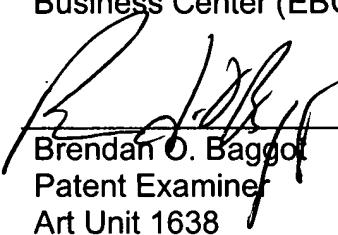
Furthermore, from first principals, because the phosphate backbone of DNA, at neutral pHs, is negative, DNA will always migrate towards the positively charged side of the electrical circuit and away from the negatively charged pole because opposite charges attract and like charges repel. The ordinarily skilled artisan understands basic wiring and that the DNA will move towards the positively charged electrode placed near the root in the applicant's and Vik et al's electrophoresis apparatus. Moreover, even if the ordinarily skilled artisan did not know about electrical current, the artisan would know to simply swap the leads when the DNA began moving from the DNA agarose plug into the buffer solution instead of from the DNA agarose plug into the meristem tissue. Thus the claimed invention would have been *prima facie* obvious as a whole to one of ordinary skill in the art, especially in the absence of evidence to the contrary.

Art Unit: 1638

Remarks

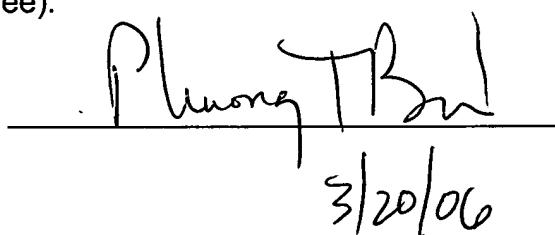
5. No claim is allowed.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brendan O. Baggot whose telephone number is 571/272-5265. The examiner can normally be reached on Monday - Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571/272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



3/20/06

Brendan O. Baggot
Patent Examiner
Art Unit 1638



3/20/06

PHUONG T. BUI
PRIMARY EXAMINER

bob